

DOT ANCHORING EPOXY

PRODUCT No. 8620-36, -37

PRODUCT DESCRIPTION

QUIKRETE® DOT Anchoring Epoxy is a two-component, 100% solids, high modulus, low-sag, structural epoxy adhesive with a working time of approximately 20 min at 75°F (24°C). Load can be applied at 2 hours (75°F [24°C]).

PRODUCT USE

QUIKRETE® DOT Anchoring Epoxy is a gray, solvent-free, low odor, high strength, moisture insensitive, two-component (1:1 ratio) epoxy system. QUIKRETE® DOT Anchoring Epoxy is suitable for non-overhead vertical and horizontal applications, including rebar, dowel, and anchor installations into concrete and masonry substrates where dynamic, vibratory, and intermittent loads exist; typical applications also include fastening in grout filled block and unreinforced masonry, seismic anchoring and bracing, grouting dowel bars and tie bars for full depth concrete repairs. Typical physical properties are listed below.

SIZES

- QUIKRETE® DOT Anchoring Epoxy is available in:
 - 22 oz. (650 ml, 39 cu.in.) cartridges (8620-36)
 - 53 oz. (1.56 L, 95 cu.in.) cartridges (8620-37)

TECHNICAL DATA

APPLICABLE STANDARDS

American Society for Testing & Materials (ASTM)
Meets ASTM C881, Type I, II, IV, & V, Grade 3, Class A, B & C

Table 1: Typical Physical Properties

Properties	ASTM	38°F	50°F	75°F
Gel time 60 gram sample minutes	C881	34	32	14
Working Time minutes		40	35	20
Load Time hours		24	19	2
Compressive Yield Strength - psi 7 day	D695	13,100	10,200	11,850
Compressive Modulus psi	D695	324,000	232,000	271,000
Tensile Strength psi	D638	---	---	1,350
Tensile Elongation %	D638	---	---	2.5
Bond Strength psi, 2 day	C882	2,350	2,800	3,400
Bond Strength psi, 14 day	C882	2,850	3,700	3,450
Consistency or Viscosity	C881	Non-sag		
Heat Deflection Temp	D648	133		
Water Absorption %	D570	0.24		
Linear Coefficient of Shrinkage %	D2566	0.0003		
Volatile Organic Compound (VOC)		0 g/l		

DIVISIONS 3 & 4

Concrete Anchoring
03 31 51
Masonry Anchorage
04 08 00



INSTALLATION

SURFACE PREPARATION

Always prepare holes in advance before starting a new cartridge. Recommended minimum anchor hole depth is nine times the rod diameter. Typical hole diameter is 1/8" (3 mm) greater than rod diameter. To maximize nozzle usage and achieve best results, schedule dispensing to consume an entire cartridge at one time with no interruption of adhesive flow. To achieve maximum flow and reduce fatigue, break off the nozzle to the largest diameter that will fit into the hole or screen. If the hole is 5/8" diameter or larger, snap off the smaller diameter section of the nozzle before using.

Hole Preparation and Cartridge Set up

1) Drill hole to proper diameter and depth. Blow out dust from the bottom of the hole. Brush the hole with a nylon brush. Blow out dust again. The hole should be clean of dust and debris.

2) WEAR GLOVES

3) Use only a heavy-duty professional caulking gun. Insert cartridge into caulking gun making sure it is properly positioned with shoulder of cartridge flush with top bracket of the caulking gun.

4) Remove plastic cap and end plug from the tip of the cartridge. Dispense a small amount of adhesive into a disposable container until you get an even flow of black and white material.

NOTE: Warm the cartridge to between 75°-90°F (24°-32°C) before use.

5) Thread nozzle onto the cartridge and secure. Make sure the nozzle/cartridge assembly is secure. Dispense enough epoxy into a disposable container until the color becomes a consistent gray with no streaks. If a pneumatic dispenser is used, an inline air pressure regulator is required limiting air pressure to a maximum of 90 psi (or lower).

APPLICATION

- Dispense the material at the bottom of the hole. Fill approximately 1/2 – 5/8 of the hole depth while slowly withdrawing the nozzle (enough to fill hole when anchor rod is inserted). Fill completely full for holes totally submerged in water.
- Insert the threaded rod or rebar to the bottom of the hole while turning clockwise. The threaded rod or rebar should be free of dirt, grease, oil, or other foreign materials. Do not disturb or bolt-up until minimum bolt-up time has passed (2 hours at 75°F (24°C), longer at colder temperatures.) Promptly remove any excess material.
- Nozzle will be effective for the typical working time up to 20 minutes at 75°F (24°C) before hardening if application is halted. Placed material will begin to gel and harden by 14 minutes at 75°F (24°C). The quantity of the material applied affects gel time (more material gels quicker).

CURING

QUIKRETE® DOT Anchoring Epoxy Typical Cure Schedule:

Temperature		Working Time	Bolt-Up Time
°F	°C		
40	4	40 minutes	24 hours
55	13	30 minutes	14 hours
65	18	20 minutes	6 hours
75	24	20 minutes	2 hours
85	29	10 minutes	2 hours
95	35	7 minutes	2 hours

PRECAUTIONS

- WEAR GLOVES
- CAUTION: Do not attempt to force adhesive out of a hardened mixer nozzle. Use a new mixer nozzle to avoid rupturing the container. If a leak should develop, discontinue use immediately and use a new

cartridge.

- Application temperature: 40°F to 110°F (4°C to 43°C). Warm the cartridge to between 75°-90°F (24°-32°C) before use.
- For long-term doweling, threaded rod anchoring, and engineering use – not for sustained long-term loads.
- Not for overhead applications
- Storage temperature: 40°F to 90°F (4°C to 32°C)
- Service temperature: -30°F to 140°F (-34°C to 60°C)
- Uncured material can be removed with solvents such as: WD40, citrus adhesive removers, xylene, toluene, or nail polish remover. Cured material can only be removed mechanically. Employ solvents cautiously; follow with soap and water.
- Wear chemical resistant gloves and protect eyes and skin during use. May cause allergic reaction.
- Avoid contact with strong acids.
- Do not thin with solvents; this would prevent cure
- Read MSDS at www.quikrete.com
- IRRITANT, SENSITIZER, CORROSIVE

WARRANTY

The QUIKRETE® Companies warrant this product to be of merchantable quality when used or applied in accordance with the instructions herein. The product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of its product (as purchased) found to be defective, or at the shipping companies' option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to The QUIKRETE® Companies in writing. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

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* Refer to www.quikrete.com for the most current technical data, MSDS, and guide specifications

